DEFENSE ARJ EXECUTIVE EDITOR

Welcome to the *Defense Acquisition Review Journal* (ARJ) theme edition on **Technology Transition**. There are many variations in the process by which technologies transition from research projects into military systems. Introducing high-quality military capabilities into field service is obviously critical to our national military strategy. Historically, technological superiority has long been a primary goal of the Department of Defense (DoD). As a nation at war in a world in which potential adversaries have access to new technology almost as rapidly as the United States military, the time it takes to apply new technology takes on even greater importance.

Our featured author for this issue is Col John B. Wissler, USAF. His article, "Technology Transition: A More Complete Picture," takes a broad, holistic focus on the process of technology insertion by examining the trade space in which systems designers must operate. This article offers four paths supporting technology transition and provides examples from the Air Force Research Laboratory: Space Vehicles Directorate.

The article, "Technology Management Best Practices: Reducing Technology Identification, Evaluation, and Selection Costs," by Stephen J. Moretto discusses the challenges resulting from uncertain environments, changing requirements, and advancing technology. The article also lays out a strategy for integrating the best technology management techniques to meet these challenges. Examples demonstrate how alternatives can be prioritized to fit within budget constraints, how to link capabilities to costs, and how to efficiently select the best value among competing complex systems.

Jon Andresen's article, "UID - Building the Permanent Foundation," explores the importance of common data and accurate data in a complex and changing military environment. The DoD's Unique Identifier (UID) Policy begins to address some of these issues by defining a common set of data for every expensive, tangible, serialized part. These data will be available from cradle-to-grave for all military systems and will become the foundation of future DoD logistics systems.

"Technical Evaluation of Military Ground Systems for Export Licensing: A Metric Approach," by Mrinal Mukherjee, presents an overview of a metric approach to technical evaluation using military ground systems as a case study. Metrics provide a

summary of specific technology attributes associated with the system, subsystem, or components. These attributes can be used to identify sensitive technologies which must be controlled to protect against proliferation. Metrics will assist in licensing issues, which are critical for preservation of technological superiority and national security.

In "Providing Incentives for Spiral Development: An Award Fee Plan," Donald J. Reifer and Dr. Barry W. Boehm describe a set of award fee criteria and an award fee process and plan that enable buyers to provide suppliers with incentives for using evolutionary acquisition and spiral development approaches when developing large-scale, software-intensive systems. The authors present an award fee plan designed to enhance budget, schedule, and technical performance by supplier teams who are pursuing system development and deployment under contract to the government or a lead systems integrator.

"Lessons Learned from the Development of the Joint Stand-off Target Attack Radar System (Joint STARS) Common Ground Station (CGS)," by J. Daniel Sherman, examines eight major lessons learned beginning with systems development of the airborne moving target indicator and extending through development of the CGS. Investigation of these lessons learned reveals important implications for the development of other DoD systems.

For more information on technology transition policies and programs, visit the Office of the Under Secretary of Defense, Office of Technology Transition, at http://www.acq.osd.mil/ott/.

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